AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1 1-20 (Cancelled).

- 1 21. (Currently amended) A method for performing a frequent itemset operation, the 2 method comprising the steps of: 3 performing the frequent itemset operation in a plurality of phases, wherein each phase 4 is associated with combinations that have a particular number of items; 5 during at least one phase of the plurality of phases, performing the steps of 6 determining candidate combinations that are to be evaluated during the phase; 7 grouping the candidate combinations into clusters, wherein each cluster 8 corresponds to a common combination of items, and wherein all 9 candidate combinations in a given cluster include the common 10 combination of items associated with the cluster; and 11 processing said candidate combinations, based on said clusters, to determine 12 whether the candidate combinations satisfy a frequency criteria 13 associated with said frequent itemset operation; and 14 storing, in a computer-readable medium, data that indicates which candidate 15 combinations satisfy the frequency criteria associated with said 16 frequent itemset operation. 1 22. (Currently amended) A computer-readable storage medium carrying one or more
- 1 22. (Currently amended) A computer-readable storage medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 21.
- 1 23. (Previously presented) The method of Claim 21, wherein the step of grouping the
 2 candidate combinations into clusters includes the step of establishing an ordering for
 3 said candidate combinations by sorting the candidate combinations relative to each
 4 other based on the items within each of the candidate combinations.

- 1 24. (Currently amended) A computer-readable <u>storage</u> medium carrying one or more
- 2 sequences of instructions which, when executed by one or more processors, causes
- the one or more processors to perform the method recited in Claim 23.
- 1 25. (Previously presented) The method of Claim 23, wherein the step of processing the
- 2 candidate combinations based on the clusters includes processing the candidate
- 3 combinations in a sequence based on said ordering.
- 1 26. (Currently amended) A computer-readable storage medium carrying one or more
- 2 sequences of instructions which, when executed by one or more processors, causes
- the one or more processors to perform the method recited in Claim 25.
- 1 27. (Previously presented) The method of Claim 21, wherein the step of grouping the
- 2 candidate combinations into clusters includes hashing the candidate combinations
- into buckets based on the items that the candidate combination contain.
- 1 28. (Currently amended) A computer-readable storage medium carrying one or more
- 2 sequences of instructions which, when executed by one or more processors, causes
- the one or more processors to perform the method recited in Claim 27.
- 1 29. (Previously presented) The method of Claim 21, wherein the step of processing the
- 2 candidate combinations includes generating bitmaps for the candidate combinations,
- and determining how many item groups of an item group population include each
- 4 candidate combination based on the bitmap for the candidate combination.
- 1 30. (Currently amended) A computer-readable storage medium carrying one or more
- 2 sequences of instructions which, when executed by one or more processors, causes
- the one or more processors to perform the method recited in Claim 29.
- 1 31. (Previously presented) The method of Claim 29, wherein the step of processing the
- 2 candidate combinations includes, for each cluster, performing the steps of:
- generating a bitmap for a particular combination that is a subcombination of all
- 4 combinations in the cluster;

6		combinations in the cluster;
7		using the bitmap generated for each combination in the cluster to determine how
8		many item groups include the combination; and
9		after all combinations in the cluster have been processed, discarding from volatile
10		memory the bitmap for the particular combination.
1	32.	(Currently amended) A computer-readable storage medium carrying one or more
2		sequences of instructions which, when executed by one or more processors, causes
3		the one or more processors to perform the method recited in Claim 31.
1	33.	(Previously presented) The method of Claim 21, wherein the step of processing the
2		candidate combinations includes generating bitmaps for the candidate combinations
3		as the candidate combinations are processed in a sequence, the method further
4		comprising the steps of:
5		generating one or more intermediary bitmaps for use in generating of a bitmap for a
6		current candidate combination; and
7		after generating the bitmap for the current candidate combination, retaining in volatile
8		memory only those intermediary bitmaps that are base bitmaps of a next
9		candidate combination in said sequence; and
10		if any intermediate bitmaps are retained, then using one or more of the intermediary
11		bitmaps to generate a bitmap for the next candidate combination in said
12		sequence.
1	34.	(Currently amended) A computer-readable storage medium carrying one or more
2		sequences of instructions which, when executed by one or more processors, causes
3		the one or more processors to perform the method recited in Claim 33.
	35 –	40 (Canceled)

using the bitmap for the particular combination to generate bitmaps for all

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